EATON OPERATING COMPANY, INC.

CONTRACT NO. DE-AC07-85ID12578

DOE
BR

November 18, 1991

U.S. Department ofenergy
Idaho Operations Office
785 DOE Place
Idaho Falls, ID 83402

Attn: Ms. Peggy Brookshier

RE: DOE CONTRACT NO. DE-AC07-85ID12578; SUMMARY OF ENVIRONMENTAL INVESTIGATION OF A CLOSED RESERVE PIT LOCATED WITHIN THE PLEASANT BAYOU GEOPRESSURED/GEOTHERMAL LEASE

Dear Peggy:

Please find enclosed the above referenced summary.

This report contains Dr. Jack Matson's evaluation of Southern Petroleum Laboratory's (SPL) Houston Analytical Laboratory soil analyses, EOC's conclusion and recommendation and SPL's analytical results.

After review, would you please forward this copy of the report to Sam Aoki.

Per your instructions, enclosed are two extra copies for your distribution. If additional copies are needed, please let me know.

Should additional information be necessary, please contact me.

Sincerely,

Doug Graham
Manager-Contracts & Procurement

DG/ls

cc: Dr. Phil Randolph
PB Soil Analyses File

FAX (713) 465-2849 1240 BLALOCK, SUITE 100 HOUSTON, TEXAS 77055 (713) 465-8700

DISCLAIMER

ENVIRONMENTAL INVESTIGATION

OF A CLOSED RESERVE PIT LOCATED WITHIN

THE PLEASANT BAYOU GEOPRESSURED/GEOTHERMAL LEASE

NOVEMBER 15, 1991

EATON OPERATING COMPANY , INC.

1240 Blalock, Suite 100
Houston, Texas 77055

713/465-8700
FAX 713/465-2849

ENVIRONMENTAL INVESTIGATION
OF A CLOSED RESERVE PIT LOCATED WITHIN
THE PLEASANT BAYOU GEOPRESSURED/GEOTHERMAL LEASE

SUMMARY

As requested by the U.S. Department of Energy, Idaho Falls, Idaho Operations Office (DOE-ID), Eaton Operating Company, Inc. (EOC), as a prime contractor to DOE-ID under Contract No. DE-AC07-85ID12578, initiated an environmental investigation on August 25, 1991 of the closed reserve pit located on the Pleasant Bayou site.

This investigation consisted of collecting twenty-four (24) soil samples, 12 from a depth of 5" and 12 from 6', and analyzing each one for nine (9) heavy metals, plus Hexavalent Chromium, five (5) anions, and four (4) cations.

These tests were conducted to establish the composition of the soil from within the pit (samples, test no. 1 thru 10) and from two sites outside the pit area (control no. 1 and 2).

The results would determine whether the pit closure performed by Fenix & Scisson, Inc. in 1984 continued to satisfy federal, state and/or local regulations, or whether additional analytical work was called for to establish if follow-up remediation was required.

Results were received on October 16, 1991 and were forwarded to Dr. Jack V. Matson, Ph.D., P.E. for review.

Dr. Matson's review revealed that, except for Barium, all heavy metals fell within normal ranges for soils, and all volatile organics (VOC's) "were much lower" than the Resource Conservation and Recovery Act's (RCRA) maximum concentrations for determining a hazardous waste, as established by the toxicity characteristic leaching procedure (TCLP). Thus, with the possible exception of Barium, all results indicated that no hazardous waste problem existed.

Dr. Matson recommended that TCLP testing for Barium be run on six (6) selected samples to determine if soil located in or around the pit exceeded RCRA's TCLP limitations for Barium, 100.0 mg/l, thus qualifying this site as containing a hazardous substance. These results were received on November 4, 1991 and confirms that no hazardous waste existed, since the highest Barium TCLP results obtained was 2.00 mg/l. Under current federal and State of Texas regulations, the substances contained within the soils of this pit are derivatives of drilling fluids used in the exploration of oil, gas, and/or geothermal energy, are classified as "nonhazardous oilfield waste" (NOW), and are exempt from federal regulation.

Such substances do, however, fall under the jurisdiction of the Texas Railroad Commission with substance limitations being established on an as needed and case by case basis. Yet, to minimize any future impact resulting from a change in current regulations that would reclassify a Nonhazardous Oilfield Waste (NOW) into a hazardous waste, this investigation was carried out as if the current "NOW" exemption did not exist.

To this end, all analytical results confirm that this investigation found no evidence of any condition that violates any environmental law, rule or regulation.

HISTORY

Pleasant Bayou's geopressured/geothermal program was initiated by DOE-NV's Contractor, General Crude Oil Company, in the summer of 1978 with the drilling of the Pleasant Bayou No. 1 Well. This well encountered mechanical difficulties which led to the drilling of the Pleasant Bayou Well No. 2. The contract was then assumed by Fenix & Scisson.

Both drilling operations utilized a common reserve pit which was closed by Fenix & Scisson in 1984. (Ref. Pgs. 46-48 of Fenix & Scisson's Final Report, dated July 1985, "Correspondence" section).

Upon conclusion of Fenix & Scisson's activities in August of 1984, this site remained inactive until Eaton was awarded DOE-ID's new geopressured/geothermal contract in October 1985. Thus, between October 1985 and the writing of this report, this site has experienced various stages of refurbishment, construction, and reservoir flow testing. None of Eaton's activities, however, involved the closed reserve pit until Eaton was instructed by DOE-ID, on September 23, 1991, to investigate the pit area through soil analyses.

Twenty four individual soil samples were collected for analyses on September 25 and 26, 1991.

SAMPLE ACQUISITION

The sampling program (collection and analyses) was outlined by Mr. Sam Aoki, DOE-ID, during a meeting held in Eaton's office on August 23, 1991. Per Mr. Aoki's instruction, twelve (12) sampling sites would be investigated. Each sampling site would provide two (2) individual samples (one from a depth of 5" and one from 6') for a total of twenty four (24) samples. Of these samples, ten (10), identified test nos. 1 thru 10, would come from what was believed to be the interior of the pit, and two (2), control nos. 1 and 2, from outside the pit area. (Ref. Attachment "A".)

Each sample was then analyzed for nine (9) heavy metals, plus Hexavalent Chromium, five (5) anions and four (4) cations. (Ref. to Table 1.) Total dissolved solids (TDS) were not run since this test can only be conducted on liquids. To provide additional baseline data, each collection point was monitored with a flame ionization detector (FID). The average total hydrocarbon reading, for all but two of the collection points, ran between two (2) and four (4) PPM. Those samples with higher than average readings came from the 6' sample of Site No. 8 and has a reading of 35 PPM, while the 5" sample from Site No. 3 had a reading of 20 PPM.

These elevated FID readings led to Mr. Aoki's recommendation that volatile organics (VOC's) be conducted on each of these samples. Such testing was initiated October 23, 1991.

RESULT EVALUATION

Sample results were received from the EPA contract lab, Southern Petroleum Laboratory (SPL) on October 16, 1991. All results were subsequently forwarded to Dr. Jack V. Matson, Ph.D., P.E. for independent review.

Dr. Matson's report confirmed that, except for Barium, all heavy metals including Hexavalent Chromium, fell within normal ranges for soils. Dr. Matson also reported that each of the volatile organics (VOC's) investigated "were much lower" than RCRA's maximum concentrations for determining a hazardous waste, as established by the toxicity characteristic leaching procedure (TCLP).

TCLP testing for Barium was conducted on six selected soil samples to determine if the TCLP limitation of 100 mg/l would be exceeded. Results received on November 4, showed the highest reading to be 2.00 mg/l, thus confirming that no hazardous waste existed.

CONCLUSION AND RECOMMENDATION

Based on the results of the soil sample analyses conducted by Southern Petroleum Laboratory (SPL), and independently reviewed by Dr. Jack V. Matson, Ph.D., P.E., it is our opinion that no hazardous substances or wastes, exist in or around the soils comprising the closed reserve pit located at the Pleasant Bayou site.

Thus, no further investigative activity is warranted or required at this time.

TABLE 1

HEAVY METALS

Arsenic (Graphite Furnace) 5 PPB
Barium (ICP) 50 PPB
Cadmium (ICP) 10 PPB
Chromium (ICP) 20 PPB, plus Hexavalent Chromium
Lead (ICP) 50 PPB
Mercury (Cold Vapor) .2 PPB
Selenium (Graphite Furnace) 5 PPB
Silver (ICP) 10 PPB

ANIONS

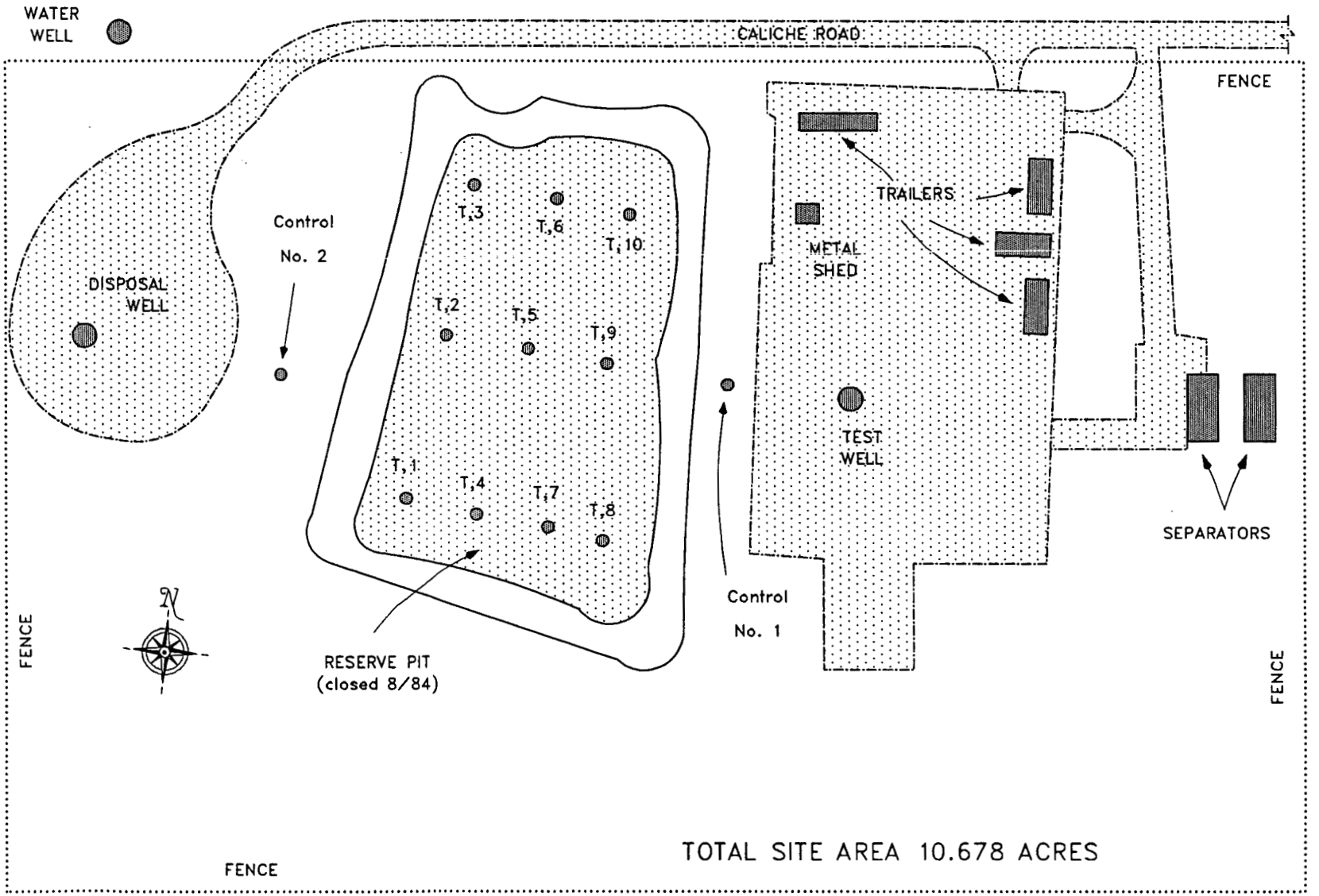
Chloride (CLD) 1 mg/1
Carbonate (Co_3) 1 mg/1
Bicarbonate (HCo_3) 1 mg/1
Nitrate-Nitrogen (No_3) 0.01 mg/1
So_4 (Sulfate) 1 mg/1

CATIONS

Dissolved Calcium (CADP) 50 PPB
Dissolved Potassium (KDP) 200 PPB
Dissolved Magnesium (MGDP) 30 PPB
Dissolved Sodium (NADP) 200 PPB

PLEASANT BAYOU GEOPRESSURE/GEOTHERMAL SITE

Location Of Soil Samples Collected From Sites Closed Reserve Pit And
Placement Of Two (2) Control Samples. Samples Collected 9/25/91 & 9/26/91



10/90

EATON – KPP

ATTACHMENT "A"

Department of Energy

Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83402

September 23, 1991

BEM
Rod
Tom
GEORGE
PLS @ TO

RECEIVED
SEP 2 1991
9/27/91

Mr. Doug Graham
Manager-Contracts & Procurement
Eaton Operating Company, Inc.
1240 Blalock, Suite 100
Houston, Texas 77055

SUBJECT: DOE Contract No. DE-AC07-85ID12578, Soil Analyses of Old Reserve Pit, Pleasant Bayou

Dear Mr. Graham:

In reference to your letter of September 4, 1991, subject as above, the DOE requests that Eaton Operating Co. (EOC) conduct analyses on approximately 24 soil samples at a total estimated cost of $7,000. DOE agrees with EOC that this initial work is considered in-scope and since EOC is currently operating below budget, this effort can be covered under the current funding. If this effort results in the need for additional testing or actual disposal of contaminated soil that is outside of the current contract scope, we request that EOC submit a cost proposal for the DOE Contracting Officer's review and approval.

If you have any questions, please contact Trudy Thorne at (208) 526-9519.

Sincerely,

R. Jeffrey Hoyles

R. Jeffrey Hoyles
Contracting Officer
Acting Chief, Acquisition Branch
Contracts Management Division

EATON OPERATING COMPANY, INC.

CONTRACT NO. DE-AC07-85ID12578

September 4, 1991

U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, ID 83402

Attn: Ms. Trudy Thorne

RE: DOE CONTRACT NO. DE-AC07-85ID12578;
SOIL ANALYSES OF OLD RESERVE PIT, PLEASANT BAYOU

Dear Trudy:

Per Ken Taylor's request, this letter is being submitted to establish a soil analysis program for the pre-existing reserve pit located on the Pleasant Bayou site.

As discussed with Sam Aoki during a meeting held in our offices on Friday, 8/23/91, this pit was utilized during the initial drilling of both Pleasant Bayou wells, No. 1 and 2, and was closed (remediated) by DOE-NV's contractor, Fenix & Scisson, approximately 14 months before Eaton's involvement with this site. (Ref. attached pages 46-48 of Fenix & Scisson's Final Report dated July 1985.)

Yet, to establish a baseline of information on the soil composition contained within this pit, Sam Aoki has requested that EOC conduct soil analyses on a total of twenty four (24) individual soil samples. Each sample will be analyzed for nine (9) heavy metals - Arsenic, Barium, Boron, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver; five (5) Anions - Chloride, Carbonate, Bicarbonate, Nitrate-Nitrogen, Sulfate (SO_4); four (4) Cations - dissolved Calcium, dissolved Potassium, dissolved Magnesium, dissolved Sodium; and total dissolved solids.

Sam Aoki is scheduled to be at Pleasant Bayou September 19 and 20 and oversee Eaton's collection of these samples. Results will be received from the lab in approximately 12 working days and at a total projected cost of $7,000.00.

FAX (713) 465-2849 1240 BLALOCK, SUITE 100 HOUSTON, TEXAS 77055 (713) 465-8700

Ms. Trudy Thorne

September 4, 1991

EOC concurs that this initial investigation does fall within the intent of our current contract's scope of work. We must point out, however, that the cost associated with this effort was not anticipated, and was not included in any of EOC's previously submitted cost proposals.

EOC, however, is currently operating below budget and will not require any additional funding to conduct this analytical work.

Should any of the results obtained from this initial effort reveal that additional testing is necessary, or that actual disposal of contaminated soil is required, EOC stands ready to provide any and all services necessary to remediate this site to the fullest extent of the law.

Should this occur, EOC must also point out that this increased effort is not currently part of our contract, is a change in scope, and would require a submission of a separate cost proposal for DOE-ID's approval.

Should the above meet with your understanding and approval, please provide written confirmation so that final arrangements can be made with an EPA contract laboratory.

Sincerely,

Doug Graham
Manager-Contracts & Procurement

DG/ls

cc: Ken Taylor - DOE-ID
DOE Contract File
P.B. Soil Analysis File

PLEASANT BAYOU GEOPRESSURED/GEOTHERMAL TESTING PROJECT BRAZORIA COUNTY, TEXAS

FINAL REPORT

JULY 1985

FENIX & SCISSON, INC.
1401 S. BOULDER
TULSA, OKLAHOMA 74119

FENIX & SCISSON, INC.
P.O. BOX 498
MERCURY, NEVADA 89023

U. S. DEPARTMENT OF ENERGY CONTRACT DE-AC08-84NV10322

9.0 PLACING THE SITE ON STANDBY-SECURED

9.1 Plans

Detailed plans were developed for placing the site on standby-secured. The objective was to suspend all field activities and secure the site in a manner which would be cost effective both during the suspended period and upon resumption of site operations. Summary of the planned operations were as follows:

- Remove the Blanks Drilling Corp.'s rig from the location
- Flush the surface piping and production equipment with corrosion inhibitor and maintain on nitrogen purge to protect against corrosion
- Drain, backfill, compact, and reseed the reserve pit area
- Maintain site electrical power, security fence, and floodlights
- Provide for site maintenance during the secured period

All of the above was accomplished with the exception of demobilizing the rig.

9.2 Rig Demobilization.

Blanks Drilling Corp.'s subcontract was modified allowing Blanks to store its rig on location during the secured period.

9.3 Reserve Pit Restoration

For planning purposes, it was necessary to determine the amount of clean fluid and sludge contained in the reserve pit. This was done by obtaining depth measurements of fluid and sludge on a grid pattern across the entire pit area. Using these measurements, the volumes were calculated.

9.3.1 Dewatering. Prior to dewatering, the reserve pit samples of the fluid were analyzed to determine what method of water disposal was most appropriate. Table 9-1 is a tabulation of the results of the analyses.

The water quality did not meet the discharge requirements of the Railroad Commission of Texas (RCC) or the Texas Department of Water Resources. Alternatives were to haul the water by truck to an RRC-approved disposal site or inject it into the No. 1 well. Economics favored injection since there was little risk in formation damage with the elevated chloride level.

TABLE 9-1
RESERVE PIT FLUID ANALYSIS

pH	5.8
Alkalinity mg/l	30
Chlorides $x10^3$ mg/l	9.8
Conductivity $x10^3$	22.3
Salinity ppm	13,700
Specific gravity at 60^o F	1.01
Sulfates mg/l	15.6
Suspended solids mg/l	49
Dissolved solids mg/l	19,860
Hardness as mg/l $CaCO_3$	6,200
Hydrocarbons mg/l	<0.05

Heavy Metals mg/l

Arsenic	0.21
Boron	0.24
Cadmium	<0.05
Chromium	<0.05
Copper	<0.05
Lead	<0.05
Manganese	4.80
Mercury	<0.05
Zinc	81.60
Barium	3.80
Nickel	<0.05
Selenium	<0.05
Silver	<0.05

The water was removed from the pit with a centrifugal pump and pumped through a 10 micron filter into a storage tank. From the tank, a positive displacement triplex pump was used to inject the water into the No. 1 well. Injection rates varied between 150 and 250 gpm with injection pressures between 350 and 500 psig. All but 500 barrels of pit fluid was disposed of by this method, a total of approximately 30,000 barrels. The remaining 500 barrels were removed by vacuum truck and disposed of at an RRC-approved site.

During fluid injection, communications developed between the 5-1/2 inch tubing and the 9-5/8 inch casing annulus. A maximum of 130 psig was observed on the annulus when the injection pressure was 500 psig. Cause of the communications has not yet been determined.

Seal assembly movement due to tubing string contraction, from injection of cooler water, could have caused seal failure. It is also possible that after six months of injecting hot brine, the seal assembly became stuck inside the seal bore in the expanded position. The additional stresses from injection of cooler fluids may have caused a connection leak.

9.3.2 Backfilling. Following removal of the water, the remaining sludge was solidified by addition of large quantities of lime and flyash. A combined total of approximately 500 tons of lime and flyash were used. The area was then covered with soil, contoured to approximate the existing terrain, tilled, fertilized, and reseeded. Pit restoration was completed 8-25-84 and the site was secured.

Jack V. Matson, Ph.D., P.E.
Consulting Engineer
P.O. Box 710497
Houston, Texas 77271-0497

November 12, 1991

Mr. Doug Graham
Eaton Operating Company
1240 Blalock - Suite 100
Houston, Texas 77055

Re: Barium TCLP Test Results

Dear Mr. Graham:

The results of the barium TCLP testwork for hazardousness as defined by EPA of six selected soil samples from Pleasant Bayou's closed reserve pit were negative. As shown in the attached table, all samples were far below the 100 mg/l limit for barium. The highest sample was 2.0 mg/l, five percent of the standard.

These results combined with the previous analyses show that the closed reserve pit does not contain hazardous waste as defined by RCRA under the Characteristic Waste Regulations.

Sincerely,

Jack V. Matson

Jack V. Matson, Ph.D., P.E.

Jack V. Matson, Ph.D., P.E.
Consulting Engineer
P.O. Box 710497
Houston, Texas 77271-0497

TCLP Results
Barium

Sample	Barium Concentration mg/kg
Control 1- 5"	0.64
Control 1- 6'	1.08
Test 2 - 5"	0.39
Test 5 - 5"	0.91
Test 9 - 5"	0.53
Test 10 - 6'	2.00

Jack V. Matson, Ph.D., P.E.
Consulting Engineer
P.O. Box 710497
Houston, Texas 77271-0497

October 23, 1991

Mr. Doug Graham
Eaton Operating Company
1240 Blalock - Suite 100
Houston, Texas 77055

Re: Review of Results of Soil Samples Collected From Pleasant Bayou's Closed Reserve Pit Contract No. DE-AC07-851D12578

Dear Mr. Graham:

I reviewed the results of the soil sample chemical compositions from Pleasant Bayou's closed reserve pit. First, I compared the heavy metal concentrations in the soil samples to the normal ranges found in soils. All heavy metals fell within the normal ranges with the exception of barium. Second, I checked the concentrations of VOC's against the TCLP maximum concentrations for determination of a hazardous waste. All VOC's were much lower, indicating no problem.

The only potential problem is barium. It ranged from a low of 39 mg/kg to 15,400mg/l. Barium is a constituent of drilling mud, which accounts for the high concentrations. The question is, are the concentrations of barium high enough to exceed the TCLP containment level of 100 mg/l in the leaching test? The only way to find out is to run the TCLP for barium only on a range of samples containing high barium levels. Just because the barium content is high in the soil does not mean the barium will dissolve and leach out. Testing will provide that answer. See the Table for recommended first phase testing.

If one or more sample TCLP results show barium above 100 mg/l, then the materials at the sample location are considered hazardous under the Federal RCRA regulations. You will be required to report your findings to the Texas Water Commission, which will trigger ground water monitoring, site cleanup, and closure. On the other hand, if the results show barium less than 100 mg/l, the site is considered clean and you have no reporting responsibilities.

Sincerely,

Jack Matson

Jack V. Matson, Ph.D., P.E.

Jack V. Matson, Ph.D., P.E.
Consulting Engineer
P.O. Box 710497
Houston, Texas 77271-0497

TABLE

Barium Testing Results

Sample 10		Depth	Barium Concentration mg/kg	Run TCLP
Control*	1	5"	7400	X
	1	6'	10900	X
Control*	2	5"	2340	
	2	6'	700	
Test	1	5"	12500	
	1	6'	39	
Test	2	5"	12000	X
	2	6'	492	
Test	3	5"	306	
	3	6'	123	
Text	4	5"	8500	
	4	6'	83	
Test	5	5"	15400	X
	5	6'	1490	
Test	6	5"	5900	
	6	6'	404	
Test	7	5"	9400	
	7	6'	422	
Test	8	5"	5300	
	8	6'	8200	
Test	9	5"	5800	X
	9	6'	2290	
Test	10	5"	10900	
	10	6'	3830	X

*Note: Control samples appear to be contaminated

Maximum Concentration of Contaminants for Toxicity Characteristic as Determined Using TCLP

Contaminant	Level (mg/l)	Contaminant	Level (mg/l)
Arsenic	5.0	Hexachlorobenzene	0.13
Barium	100.0	Hexachlorobutadiene	0.5
Benzene	0.5	Hexachloroethane	3.0
Cadmium	1.0	Lead	5.0
Carbon tetrachloride	0.5	Lindane	0.4
Chlordane	0.03	Mercury	0.2
Chlorobenzene	100.0	Methoxychlor	10.0
Chloroform	6.0	Methyl ethyl ketone	200.0
Chromium	5.0	Nitrobenzene	2.0
o-Cresol	200.0	Pentachlorophenol	100.0
m-Cresol	200.0	Pyridine	5.0
p-Cresol	200.0	Selenium	1.0
Cresol	200.0	Silver	5.0
2,4-D	10.0	Tetrachloroethylene	0.7
1,4-Dichlorobenzene	7.5	Toxaphene	0.5
1,2-Dichloroethane	0.5	Trichloroethylene	0.5
1,1-Dichloroethylene	0.7	2,4,5-Trichlorophenol	400.0
2,4-Dinitrotoluene	0.13	2,4,6-Trichlorophenol	2.0
Endrin	0.02	2,4,5-TP (Silvex)	1.0
Heptachlor (and its hydroxide)	0.008	Vinyl chloride	0.2

EATON OPERATING COMPANY, INC.

CONTRACT NO. DE-AC07-85ID12578

October 16, 1991

Dr. Jack Matson
P.O. 710497
Houston, TX 77271-0497

RE: REVIEW RESULTS OF SOIL SAMPLES COLLECTED FROM PLEASANT BAYOU'S CLOSED RESERVE PIT

Dear Jack:

Enclosed are the soil sampling results we discussed by phone.

A total of twenty four (24) samples were collected, 12 from a depth of 5" and 12 from 6'. Of this total, ten (10) sampling sites, (test no. 1 thru 10) were from what EOC believes to be the interior of the old reserve pit, and two (2) sites (control no. 1 & 2) were from outside the pit area.

These tests were conducted to establish the composition of the soil within this pit, and determine if remediation beyond what was done by the contractor that closed the pit in 1984 is necessary.

Thus, please include in your written review which regulation(s) federal and/or state, has jurisdiction over old reserve pits (i.e., soil contamination), which parameters are identified by the regulation(s) for determining whether contamination exists or not, what threshold limits do these parameters carry, and do any of our results exceed these limits?

Sincerely,

Doug Graham
Manager-Contracts & Procurement

DG/ls

cc: PB Soil Sampling File
J. Matson Vendor File

FAX (713) 465-2849 1240 BLALOCK, SUITE 100 HOUSTON, TEXAS 77055 (713) 465-8700

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: F1-10-369

Approved for release by:

Date: 11-4-91

for R. Schrynemeeckers, Laboratory Director

Date: 11/4/91

C. Schreiner, QA Manager

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-01A
CLIENT ID: Control-1 5'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	0.48	0.64	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-01A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Control-1 5'
f109388

Date Received: 10/23/91
Date Collected: 09/25/91 10:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	0.48 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-02A
CLIENT ID: Control-1 6'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	0.81	1.08	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-02A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Control-1 6'
F109388

Date Received: 10/23/91
Date Collected: 09/25/91 10:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	0.81 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-03A
CLIENT ID: Test-2 5'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	0.29	0.39	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-03A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Test-2 5'
F109430

Date Received: 10/23/91
Date Collected: 09/26/91 15:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	0.29 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-04A
CLIENT ID: Test-5 5'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	0.68	0.91	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-04A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Test-5 5'
F109430

Date Received: 10/23/91
Date Collected: 09/26/91 12:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	0.68 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-05A
CLIENT ID: Test-9 5'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	0.40	0.53	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-05A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Test-9 5'
F109430

Date Received: 10/23/91
Date Collected: 09/26/91 10:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	0.40 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

CLIENT NAME: Eaton Industries of Houston SPL #: F110369-06A
CLIENT ID: Test-10 6'

TCLP SUMMARY

PARAMETER	UNCORRECTED RESULTS (mg/L)	CORRECTED RESULTS * (mg/L)	REGULATORY LIMIT (mg/L)
BARIUM	1.50	2.00	100.0

* = Reference Federal Register 55, 26986 (6/29/90), RCRA Toxicity Characteristic Final Rule.
** = These two compounds are quantitated together.
Compounds reflect terminology and regulatory limits as presented in Federal Register, (3/29/90 & 6/29/90).

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F110369-06A
Invoice #: 404656
Report Date: 11/04/91

MRPB-91-938
Test-10 6'
F109433

Date Received: 10/23/91
Date Collected: 09/26/91 09:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Barium, TCLP Leachate METHOD_6010	1.50 mg/L	0.07	11/01/91	DQ
Acid Digestion - Microwave EPA_CLP_SOW	Complete		10/30/91	CG
TCLP Leachate extraction METHOD_1311	Complete		10/29/91	ET

SPL ENVIRONMENTAL LABORATORIES, INC.

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: E1-09-433

Approved for release by:

R. Schrynemeeckers Date: 10/15/91

R. Schrynemeeckers, Laboratory Director

Cynthia Schreiner Date: 10/15/91

C. Schreiner, QA Manager

ANALYTICAL RESULTS

Volatile Organics by USEPA Method 8240

Client ID: TEST 8 6'	**Matrix:** SOIL	**Received:**	27-Sep-91
SPL ID: F10943305A	**Dilution:** 1	**Extracted:**	**********
Analyst: JC	**% Moisture:** 22	**Analyzed:**	09-Oct-91
	Level: LOW		

Compound	Concentration, ug/Kg Amount	MDL
Acetone	68	13
Benzene	ND	6
Bromodichloromethane	ND	6
Bromoform	ND	6
Bromomethane	ND	13
2-Butanone	ND	13
Carbon Disulfide	ND	6
Carbon Tetrachloride	ND	6
Chlorobenzene	ND	6
Chloroethane	ND	13
2-Chloroethylvinylether	ND	13
Chloroform	ND	6
Chloromethane	ND	13
Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6
1,2-Dichloroethane	ND	6
1,1-Dichloroethene	ND	6
Trans-1,2-Dichloroethene	ND	6
1,2-Dichloropropane	ND	6
Cis-1,3-Dichloropropene	ND	6
Trans-1,3-Dichloropropene	ND	6
Ethylbenzene	13	6
2-Hexanone	ND	13
4-Methyl-2-Pentenone	ND	13
Methylene Chloride	13	6
Styrene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
Tetrachloroethene	ND	6
Toluene	ND	6
1,1,1-Trichloroethane	ND	6
1,1,2-Trichloroethane	ND	6
Trichloroethene	ND	6
Trichlorofluoromethane	ND	6
Vinyl Acetate	ND	13
Vinyl Chloride	ND	13
Total Xylenes	13	6

SURROGATES	
1,2-Dichloroethane-D4	95% Recovery
Toluene-D8	109% Recovery
4-Bromofluorobenzene	92% Recovery

ND-Not Detected. MDL-Method detection limit.

ANALYTICAL RESULTS

Volatile Organics by USEPA Method 8240

Client ID: TEST 3 5"	Matrix: SOIL	Received: 27-Sep-91
SPL ID: F10943306A	Dilution: 1	Extracted: **********
Analyst: JC	% Moisture: 17	Analyzed: 09-Oct-91
	Level: LOW	

Compound	Concentration, ug/Kg Amount	M D L
Acetone	ND	12
Benzene	ND	6
Bromodichloromethane	ND	6
Bromoform	ND	6
Bromomethane	ND	12
2-Butanone	ND	12
Carbon Disulfide	ND	6
Carbon Tetrachloride	ND	6
Chlorobenzene	ND	6
Chloroethane	ND	12
2-Chloroethylvinylether	ND	12
Chloroform	ND	6
Chloromethane	ND	12
Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6
1,2-Dichloroethane	ND	6
1,1-Dichloroethene	ND	6
Trans-1,2-Dichloroethene	ND	6
1,2-Dichloropropane	ND	6
Cis-1,3-Dichloropropene	ND	6
Trans-1,3-Dichloropropene	ND	6
Ethylbenzene	ND	6
2-Hexanone	ND	12
4-Methyl-2-Pentenone	ND	12
Methylene Chloride	11	6
Styrene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
Tetrachloroethene	ND	6
Toluene	ND	6
1,1,1-Trichloroethane	ND	6
1,1,2-Trichloroethane	ND	6
Trichloroethene	ND	6
Trichlorofluoromethane	ND	6
Vinyl Acetate	ND	12
Vinyl Chloride	ND	12
Total Xylenes	ND	6

SURROGATES

1,2-Dichloroethane-D4	89% Recovery
Toluene-D8	115% Recovery
4-Bromofluorobenzene	86% Recovery

ND-Not Detected. MDL-Method detection limit.

ANALYTICAL RESULTS

Volatile Organics by USEPA Method 8240

Client ID: TEST 3 6'	Matrix: SOIL	Received: 27-Sep-91
SPL ID: F10943307A	Dilution: 1	Extracted: **********
Analyst: JC	% Moisture: 27	Analyzed: 09-Oct-91
	Level: LOW	

Compound	Concentration, ug/Kg Amount	MDL
Acetone	62	14
Benzene	ND	7
Bromodichloromethane	ND	7
Bromoform	ND	7
Bromomethane	ND	14
2-Butanone	ND	14
Carbon Disulfide	ND	7
Carbon Tetrachloride	ND	7
Chlorobenzene	ND	7
Chloroethane	ND	14
2-Chloroethylvinylether	ND	14
Chloroform	ND	7
Chloromethane	ND	14
Dibromochloromethane	ND	7
1,1-Dichloroethane	ND	7
1,2-Dichloroethane	ND	7
1,1-Dichloroethene	ND	7
Trans-1,2-Dichloroethene	ND	7
1,2-Dichloropropane	ND	7
Cis-1,3-Dichloropropene	ND	7
Trans-1,3-Dichloropropene	ND	7
Ethylbenzene	ND	7
2-Hexanone	ND	14
4-Methyl-2-Pentenone	ND	14
Methylene Chloride	14	7
Styrene	ND	7
1,1,2,2-Tetrachloroethane	ND	7
Tetrachloroethene	ND	7
Toluene	ND	7
1,1,1-Trichloroethane	ND	7
1,1,2-Trichloroethane	ND	7
Trichloroethene	ND	7
Trichlorofluoromethane	ND	7
Vinyl Acetate	ND	14
Vinyl Chloride	ND	14
Total Xylenes	ND	7

SURROGATES

1,2-Dichloroethane-D4	93% Recovery
Toluene-D8	99% Recovery
4-Bromofluorobenzene	95% Recovery

ND-Not Detected. MDL-Method detection limit.

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 109433 SAS No.: _____ SDG No.: 109433

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	TEST_3_5_	115	86	89	0	0
02	TEST_3_6_	99	95	93	0	0
03	TEST_8_6_	109	92	95	0	0
04	VBLKSOIL02	102	101	95	0	0

		QC LIMITS
S1 (TOL)	= Toluene-d8	(81-117)
S2 (BFB)	= Bromofluorobenzene	(74-121)
S3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 109433 SAS No.: _____ SDG No.: 109433

Matrix Spike - EPA Sample No.: TEST_3_6_____ Level:(low/med) LOW ___

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	68.5	0	73.7	108	59-172
Trichloroethene	68.5	0	73.7	108	62-137
Benzene	68.5	0	75.2	110	66-142
Toluene	68.5	0	74.9	109	59-139
Chlorobenzene	68.5	0	77.1	113	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	68.5	62.9	92	16	22	59-172
Trichloroethene	68.5	68.9	101	7	24	62-137
Benzene	68.5	72.9	106	4	21	66-142
Toluene	68.5	79.3	116	-6	21	59-139
Chlorobenzene	68.5	75.1	110	3	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: 8240,109433,,TEST 3 6',L,S,F10943307A,V,E,5.0 GRS,
PACK,1009VL2C2,1009BFC2,1009VLCB2,,,,45/3-220@8,INST C1,

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 109433 SAS No.: _____ SDG No.: 109433

Lab File ID: 1009VLCS2 Lab Sample ID: VLBLK021009S

Date Analyzed: 10/09/91 Time Analyzed: 2002

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: C1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TEST_3_5_	F10943306A	V943306	2312
02	TEST_3_6_	F10943307A	V943307	2355
03	TEST_8_6_	F10943305A	V943305	2224

COMMENTS: SPLINC,BLANK,,VBLK02,L,,VLBLK021009C,V,B,
PACK,1009VL2C2,1009BFC2,1009VLCB2,,,,45/3-220@8,INST C1,

ANALYTICAL RESULTS

Volatile Organics by USEPA Method 8240

Client ID: VBLKSOIL02	**Matrix:** SOIL	**Received:**	
SPL ID: VLBLK021009S	**Dilution:** 1	**Extracted:**	**********
Analyst: JC	**% Moisture:** NA	**Analyzed:**	09-Oct-91
	Level: LOW		

Compound	Concentration, ug/Kg Amount	MDL
Acetone	ND	10
Benzene	ND	5
Bromodichloromethane	ND	5
Bromoform	ND	5
Bromomethane	ND	10
2-Butanone	ND	10
Carbon Disulfide	ND	5
Carbon Tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroethane	ND	10
2-Chloroethylvinylether	ND	10
Chloroform	ND	5
Chloromethane	ND	10
Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Trans-1,2-Dichloroethene	ND	5
1,2-Dichloropropane	ND	5
Cis-1,3-Dichloropropene	ND	5
Trans-1,3-Dichloropropene	ND	5
Ethylbenzene	ND	5
2-Hexanone	ND	10
4-Methyl-2-Pentenone	ND	10
Methylene Chloride	ND	5
Styrene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
1,1,1-Trichloroethane	ND	5
1,1,2-Trichloroethane	ND	5
Trichloroethene	ND	5
Trichlorofluoromethane	ND	5
Vinyl Acetate	ND	10
Vinyl Chloride	ND	10
Total Xylenes	ND	5

SURROGATES	
1,2-Dichloroethane-D4	95% Recovery
Toluene-D8	102% Recovery
4-Bromofluorobenzene	101% Recovery

ND-Not Detected. MDL-Method detection limit.

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: F1-09-388

Approved for release by:

R. Schrynemeeckers Date: 10/11/91

R. Schrynemeeckers, Laboratory Director

C. Schreiner Date: 10/11/91

C. Schreiner, QA Manager

CASE NARRATIVE

QUALITY CONTROL RESULTS SUMMARY

WORK ORDER NO.: F1-09-388

SAMPLE NO: 01B

Due to matrix interference, the matrix spike recovery for Mercury is below the minimum QC limits.

SOUTHERN PETROLEUM LABORATORIES

Meaza Mariam

Meaza Mariam
Metals Supervisor

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-01A
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 5"
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	656 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	63 mg/Kg	3	09/30/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	2	09/30/91	VA/MGV
Specific Conductance METHOD_120_1	2740 umhos/cm	1	09/30/91	VA
Bicarbonate, as CaCO3 Sd_Mth_4500D	116 mg/Kg	2	09/30/91	VA/MGV
Potassium total METHOD_6010	3.4 mg/Kg	0.6	10/09/91	DQ/DAO
Magnesium total METHOD_6010	39.9 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	49 mg/Kg	2	10/09/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	0.2 mg/Kg	0.1	10/02/91	YN
pH METHOD_9045	7.53 pH unit		09/27/91	VA
Preparation, Solubles	Complete		09/26/91	EPM

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Sulfate METHOD_375_4	1550 mg/Kg	100	10/03/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-01B
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 5"
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/07/91	DQ/DAO
Arsenic total METHOD_7060	35 mg/Kg	4	10/02/91	WFL
Barium total METHOD_6010	7400 mg/Kg	100	10/10/91	DAO
Boron, Total METHOD_6010	21 mg/Kg	5	10/09/91	DQ/DAO
Cadmium total METHOD_6010	2.6 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	39 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	0.4 mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	7 wt. %	1	09/26/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/02/91	CG
Lead, Total METHOD_6010	140 mg/Kg	10	10/09/91	DQ/DAO

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Selenium, Total METHOD_7740	ND mg/Kg	2	10/03/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-01C
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 5"
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	09/30/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-02A
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 6'
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	351 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	750 mg/Kg	10	09/30/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	2	09/30/91	VA/MGV
Specific Conductance METHOD_120_1	3640 umhos/cm	1	09/30/91	VA
Bicarbonate, as CaCO3 Sd_Mth_4500D	130 mg/Kg	2	09/30/91	VA/MGV
Potassium total METHOD_6010	6.9 mg/Kg	0.6	10/09/91	DQ/DAO
Magnesium total METHOD_6010	57.9 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	330 mg/Kg	10	10/09/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/02/91	YN
pH METHOD_9045	7.54 pH unit		09/27/91	VA
Preparation, Solubles	Complete		09/26/91	EPM

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Sulfate METHOD_375_4	620 mg/Kg	100	10/03/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-02B
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 6'
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/07/91	DQ/DAO
Arsenic total METHOD_7060	3.9 mg/Kg	0.7	10/02/91	WFL
Barium total METHOD_6010	10900 mg/Kg	100	10/10/91	DAO
Boron, Total METHOD_6010	26 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	3 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	45 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	19 wt. %	1	09/26/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/02/91	CG
Lead, Total METHOD_6010	80 mg/Kg	10	10/09/91	DQ/DAO

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/03/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109388-02C
Invoice #: 404338
Report Date: 10/11/91

Pleasant Bayou
Control 1 at 6'
Eaton Operating
Department of Energy

Date Received: 09/25/91
Date Collected: 09/25/91 10:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	09/30/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: F1-09-433

Approved for release by:

R. Schrynemeeckers Date: 10/15/91

R. Schrynemeeckers, Laboratory Director

Cynthia Schreiner Date: 10/15/91

C. Schreiner, QA Manager

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109433-03A
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 16:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	185 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	900 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3830 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	95 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	1.8 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	40.3 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	760 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.03 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	720 mg/Kg	50	10/07/91	DAM

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Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109433-03B
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 16:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/L	0.01	10/07/91	DAM

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F109433-03C
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 16:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	8	10/08/91	WFL
Barium total METHOD_6010	2340 mg/Kg	80	10/10/91	DAO/DQ
Boron, Total METHOD_6010	25 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/10/91	DQ/DAO
Chromium total METHOD_6010	21 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	26 wt. %	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/03/91	WFL

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F109433-04A
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	196 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1060 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	1 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3360 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	133 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	78.3 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	500 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.85 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	150 mg/Kg	20	10/07/91	DAM

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F109433-04B
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/L	0.01	10/07/91	DAM

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Report Date: 10/15/91

Project No. MRPB-91-938
Control 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	8	10/08/91	WFL
Barium total METHOD_6010	700 mg/Kg	20	10/10/91	DAO/DQ
Boron, Total METHOD_6010	30 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/10/91	DQ/DAO
Chromium total METHOD_6010	13 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	25 wt. %	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/03/91	WFL

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SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: F1-09-430

Approved for release by:

R. Schrynemeeckers Date: 10/15/91

R. Schrynemeeckers, Laboratory Director

Cynthia Schreiner Date: 10/15/91

C. Schreiner, QA Manager

Eaton Industries of Houston
1240 Blalock
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Attn: Doug Graham/Tom Meahl

F109430-01A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 1 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	326 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	59 mg/Kg	2	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	1708 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	127 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	2.1 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	50.0 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	100 mg/Kg	10	10/07/91	DAO/DQ
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.41 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	925 mg/Kg	50	10/07/91	DAM

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F109430-01B
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Report Date: 10/15/91

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Test 1 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-01C
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 1 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	12500 mg/Kg	400	10/10/91	DAO
Boron, Total METHOD_6010	33 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	2 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	103 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	19 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	70 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	1.7 mg/Kg	0.7	10/09/91	WFL

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F109430-02A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 1 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:55:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	46 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	248 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	1219 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	132 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	18.6 mg/Kg	0.06	10/09/91	DQ/DAO
Sodium total METHOD_6010	215 mg/Kg	4	10/07/91	DAO/DQ
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.25 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	140 mg/Kg	10	10/07/91	DAM

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F109430-02B
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 1 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:55:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Project No. MRPB-91-938
Test 1 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:55:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	8 mg/Kg	8	10/08/91	WFL
Barium total METHOD_6010	39 mg/Kg	7	10/10/91	DAO
Boron, Total METHOD_6010	25 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	17 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	22 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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F109430-03A
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	902 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	2550 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	9180 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	95 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	10.9 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	158 mg/Kg	1	10/09/91	DQ/DAO
Sodium total METHOD_6010	1380 mg/Kg	20	10/07/91	DAO/DQ
Nitrate nitrogen(as N) METHOD_353_3	0.8 mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.92 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	1640 mg/Kg	100	10/07/91	DAM

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Test 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Project No. MRPB-91-938
Test 2 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	2.9 mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	12000 mg/Kg	400	10/10/91	DAO
Boron, Total METHOD_6010	25 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	41 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	19 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	50 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	0.8 mg/Kg	0.7	10/09/91	WFL

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F109430-04A
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Project No. MRPB-91-938
Test 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:25:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	35 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	460 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	4 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	2090 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	181 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	19.5 mg/Kg	0.1	10/09/91	DQ/DAO
Sodium total METHOD_6010	346 mg/Kg	4	10/07/91	DAO/DQ
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/10/91	YN
pH METHOD_9045	6.97 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	105 mg/Kg	10	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Report Date: 10/15/91

Project No. MRPB-91-938
Test 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:25:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Project No. MRPB-91-938
Test 2 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:25:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	2	10/08/91	WFL
Barium total METHOD_6010	492 mg/Kg	9	10/10/91	DAO
Boron, Total METHOD_6010	32 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	17 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	28 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	40 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-05A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 3 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	287 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	26 mg/Kg	2	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	2 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	2040 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	158 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	1.2 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	55.1 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	125 mg/Kg	4	10/07/91	DAO/DQ
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.96 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	800 mg/Kg	50	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Test 3 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Project No. MRPB-91-938
Test 3 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	1.0 mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	306 mg/Kg	7	10/10/91	DAO
Boron, Total METHOD_6010	14 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	1 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	17 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	20 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	0.8 mg/Kg	0.7	10/09/91	WFL

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Eaton Industries of Houston
1240 Blalock
Suite 100
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Attn: Doug Graham/Tom Meahl

F109430-06A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 3 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 14:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	81 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	620 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	3 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3425 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	197 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	49.6 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	560 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.82 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	420 mg/Kg	50	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-06B
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 3 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 14:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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F109430-06C
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 3 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 14:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	123 mg/Kg	8	10/10/91	DAO
Boron, Total METHOD_6010	20 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	14 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	27 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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Project No. MRPB-91-938
Test 4 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	551 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	29 mg/Kg	2	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	1 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3240 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	136 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	4.9 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	87.2 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	170 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.92 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	1410 mg/Kg	100	10/07/91	DAM

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Report Date: 10/15/91

Project No. MRPB-91-938
Test 4 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Report Date: 10/15/91

Project No. MRPB-91-938
Test 4 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 15:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	5.9 mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	8500 mg/Kg	400	10/10/91	DAO
Boron, Total METHOD_6010	27 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	30 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	21 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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F109430-08A
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 4 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	25 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	155 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	4 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	1116 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	173 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	11.1 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	230 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/10/91	YN
pH METHOD_9045	7.94 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	180 mg/Kg	10	10/07/91	DAM

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Test 4 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Test 4 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:40:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	83 mg/Kg	8	10/10/91	DAO
Boron, Total METHOD_6010	12 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	8 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	21 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	20 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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Project No. MRPB-91-938
Test 5 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	187 mg/Kg	3	10/08/91	DQ
Chloride METHOD_325_3	21 mg/Kg	2	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	1 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	1271 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	140 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	1.2 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	26.8 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	50 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.61 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	400 mg/Kg	50	10/07/91	DAM

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Project No. MRPB-91-938
Test 5 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Test 5 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	7	10/08/91	WFL
Barium total METHOD_6010	15400 mg/Kg	400	10/10/91	DAO
Boron, Total METHOD_6010	28 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	1 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	72 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	18 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	60 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/09/91	WFL

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Test 5 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:35:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	89 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1010 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	2 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3440 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	157 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	2.8 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	32.5 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	680 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/10/91	YN
pH METHOD_9045	7.47 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	260 mg/Kg	20	10/07/91	DAM

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Test 5 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:35:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Project No. MRPB-91-938
Test 5 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:35:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	1490 mg/Kg	40	10/10/91	DAO
Boron, Total METHOD_6010	24 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	18 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	30 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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Date Received: 09/27/91
Date Collected: 09/26/91 15:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	582 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	106 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3910 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	117 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	3.9 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	99.2 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	260 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.88 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	1720 mg/Kg	100	10/07/91	DAM

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Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Date Received: 09/27/91
Date Collected: 09/26/91 15:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	4.2 mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	5900 mg/Kg	200	10/10/91	DAO
Boron, Total METHOD_6010	33 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	1 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	68 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	20 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	50 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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Date Received: 09/27/91
Date Collected: 09/26/91 13:55:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	33 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	475 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	3 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	2130 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	140 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	20.7 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	420 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/10/91	YN
pH METHOD_9045	7.06 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	300 mg/Kg	20	10/07/91	DAM

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Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 13:55:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	ND mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	404 mg/Kg	8	10/10/91	DAO/DQ
Boron, Total METHOD_6010	10 mg/Kg	7	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	7 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	24 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	20 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109430-13A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	603 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	62 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3500 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	123 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	4.0 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	90.1 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	170 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.08 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	1610 mg/Kg	100	10/07/91	DAM

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Eaton Industries of Houston
1240 Blalock
Suite 100
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F109430-13B
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Eaton Industries of Houston
1240 Blalock
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F109430-13C
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:30:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	3.5 mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	9400 mg/Kg	400	10/10/91	DAO/DQ
Boron, Total METHOD_6010	24 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	52 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	20 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	50 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	58 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	983 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	1 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	3810 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	111 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	28.4 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	590 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.02 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	64 mg/Kg	10	10/07/91	DAM

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F109430-14B
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Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-14C
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 7 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	3	10/11/91	DAO
Arsenic total METHOD_7060	1.5 mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	422 mg/Kg	8	10/10/91	DAO/DQ
Boron, Total METHOD_6010	22 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	2 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	5 mg/Kg	3	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	20 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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F109430-15A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 8 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	61 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	34 mg/Kg	2	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	1 mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	666 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	111 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	ND mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	9.7 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	50 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	0.1 mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.66 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	107 mg/Kg	10	10/07/91	DAM

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F109430-15B
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Project No. MRPB-91-938
Test 8 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

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Project No. MRPB-91-938
Test 8 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 11:05:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	2.3 mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	5300 mg/Kg	100	10/10/91	DAO/DQ
Boron, Total METHOD_6010	10 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	23 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	17 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/09/91	WFL

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F109430-16A
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Project No. MRPB-91-938
Test 8 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	91 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1240 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	4680 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	95 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	1.4 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	27.4 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	710 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.08 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	28 mg/Kg	5	10/07/91	DAM

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Project No. MRPB-91-938
Test 8 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Project No. MRPB-91-938
Test 8 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 12:00:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	2.3 mg/Kg	0.8	10/08/91	WFL
Barium total METHOD_6010	8200 mg/Kg	400	10/10/91	DAO/DQ
Boron, Total METHOD_6010	9 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	22 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	22 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	20 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.8	10/09/91	WFL

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F109430-17A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	923 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1290 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	8080 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	70 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	5.7 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	166 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	680 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.94 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	1520 mg/Kg	100	10/07/91	DAM

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F109430-17B
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-17C
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:10:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	9 mg/Kg	7	10/08/91	WFL
Barium total METHOD_6010	5800 mg/Kg	100	10/10/91	DAO/DQ
Boron, Total METHOD_6010	24 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	1 mg/Kg	1	10/09/91	DQ/DAO
Chromium total METHOD_6010	59 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	14 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	60 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/09/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-18A
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	262 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1370 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	6790 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	70 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	1.2 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	159 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	780 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.15 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	510 mg/Kg	20	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/Kg	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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F109430-18C
Invoice #: 404374
Report Date: 10/15/91

Project No. MRPB-91-938
Test 9 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 10:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	1.2 mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	2290 mg/Kg	70	10/10/91	DAO/DQ
Boron, Total METHOD_6010	23 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	1 mg/Kg	1	10/10/91	DQ/DAO
Chromium total METHOD_6010	13 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	19 wt.%	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/07/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	30 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/09/91	WFL

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SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: F1-09-433

Approved for release by:

R. Schrynemeeckers Date: 10/15/91

R. Schrynemeeckers, Laboratory Director

Cynthia Schreiner Date: 10/15/91

C. Schreiner, QA Manager

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F109433-01A
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Test 10 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	276 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	105 mg/Kg	5	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	1574 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	99 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	2.8 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	31.2 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	130 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	7.38 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	700 mg/Kg	50	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

Eaton Industries of Houston
1240 Blalock
Suite 100
Houston, Texas 77055
Attn: Doug Graham/Tom Meahl

F109433-01B
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Test 10 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/L	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

SPL ENVIRONMENTAL LABORATORIES, INC.

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F109433-01C
Invoice #: 404375
Report Date: 10/15/91

Project No. MRPB-91-938
Test 10 5"
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:20:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	10 mg/Kg	7	10/08/91	WFL
Barium total METHOD_6010	10900 mg/Kg	400	10/10/91	DAO/DQ
Boron, Total METHOD_6010	60 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	3 mg/Kg	1	10/10/91	DQ/DAO
Chromium total METHOD_6010	81 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.3	10/04/91	JU
Moisture, E.P.A. CLP_SOW	13 wt. %	13	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	90 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/03/91	WFL

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F109433-02A
Invoice #: 404375
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Project No. MRPB-91-938
Test 10 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Calcium total METHOD_6010	271 mg/Kg	3	10/09/91	DQ
Chloride METHOD_325_3	1700 mg/Kg	50	10/04/91	DAM
Carbonate, as CaCO3 Sd_Mth_4500D	ND mg/Kg	1	10/08/91	KEW
Specific Conductance METHOD_120_1	4900 umhos/cm	1	10/04/91	MGV
Bicarbonate, as CaCO3 Sd_Mth_4500D	99 mg/Kg	1	10/08/91	KEW
Potassium total METHOD_6010	2.0 mg/Kg	0.6	10/07/91	DAO/DQ
Magnesium total METHOD_6010	119 mg/Kg	0.6	10/09/91	DQ/DAO
Sodium total METHOD_6010	750 mg/Kg	10	10/08/91	DQ/DAO
Nitrate nitrogen(as N) METHOD_353_3	ND mg/Kg	0.1	10/03/91	YN
pH METHOD_9045	6.98 pH units		09/30/91	VA
Preparation, Solubles	Complete		10/01/91	EPM
Sulfate METHOD_375_4	180 mg/Kg	20	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Test 10 6'
Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Chromium, Hexavalent METHOD_307B	ND mg/L	0.01	10/07/91	DAM

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.

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Pleasant Bayou

Date Received: 09/27/91
Date Collected: 09/26/91 09:45:00

Test Name Method	Result Units	Detection Limit	Date Started	Analyst
Silver total METHOD_6010	ND mg/Kg	2	10/11/91	DAO
Arsenic total METHOD_7060	1.6 mg/Kg	0.7	10/08/91	WFL
Barium total METHOD_6010	3830 mg/Kg	70	10/10/91	DAO/DQ
Boron, Total METHOD_6010	9 mg/Kg	6	10/09/91	DQ/DAO
Cadmium total METHOD_6010	ND mg/Kg	1	10/10/91	DQ/DAO
Chromium total METHOD_6010	13 mg/Kg	2	10/09/91	DQ/DAO
Mercury, Total METHOD_7471	ND mg/Kg	0.4	10/04/91	JU
Moisture, E.P.A. CLP_SOW	20 wt. %	1	09/30/91	VA
Acid Digestion-Solid,GF METHOD_3050	Complete		10/01/91	PB
Acid Digestion-Solid,ICP METHOD_3050	Complete		10/07/91	PB
Lead, Total METHOD_6010	20 mg/Kg	10	10/09/91	DQ/DAO
Selenium, Total METHOD_7740	ND mg/Kg	0.7	10/03/91	WFL

ND = Parameter analyzed for but not detected. The reported limit is the minimum attainable detection limit for the sample.